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EXAMINER	
YUEN, KAN	

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/633,440	ROEDER, MICHAEL T.	
	Examiner	Art Unit	
	KAN YUEN	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,9-16,18,19 and 21-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-6, 9-16, 18, 19, 21-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments with respect to claims *1, 3-6, 9-16, 18, 19, 21-26* have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 6 is objected to because of the following informalities:

Claim 6 is depending on claim 2 which is cancelled. Claim 6 is treated as if it is depending on claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 9, 10, 15, 16 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sreejith et al. (Pat No.: 7239608), In view of Masuda et al. (Pat no.: 6678474).

For claim 1, Sreejith et al. disclosed the method of receiving a packet that is placed into a specific class of service (COS) group pertaining to a specific service being tracked and controlled **(Sreehith et al. column 6, lines 4-38, fig. 3).** IOP 216 receives incoming data packets from PMD 212 and PMD 214 on N input channels and sends the received packets to packet classification controller 305. the controller 305 examines the IP address of the received packets and determines which data packets must be sent to switch fabric 130 and which data packets may be sent back out via PMD 212 and PMD 214, wherein PMD 212 and PMD 214 can be interpreted as two types of services;

determining a fabric-adjusted meter modifier depending of a limiting uplink being used **(Sreehith et al. column 6, lines 17-38, fig. 3).** Data packet load statistics for the O1 uplink path and the O2 uplink path are measured in packet scheduler 310 and stored in uplink load statistics table 325. The load balancing controller 315 uses the measured load statistics stored in uplink load statistic table 325 to modify the routing table information stored in load balancing table 320. Thus, the data packet load statistics are the technology of a limiting uplink, and the load balancing controller 315 is the fabric-adjusted meter modifier that controls and modifies the routing information stored in the load balancing table 320; and

adding the fabric-adjusted meter modifier to a meter corresponding to the specific COS group, wherein the meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates the meter **(Sreejith et al. column 6, lines 17-38).** The load balancing controller 315 uses the measured load statistics stored in uplink load statistic table 325 to modify or update the routing table information stored in load balancing table 320 in order to affect load balancing between the O1 and O2 uplink paths, wherein the load balancing table 320 is the meter that manages the load balancing between the O1 and O1 uplink paths.

However, Sreejith et al. did not disclose the feature of determining a fabric-adjusted meter modifier depending on a payload size of the packet. Masuda et al. from the same or similar fields of endeavor teaches the method of determining a fabric-adjusted meter modifier depending on a payload size of the packet **(Masuda et al. column 20, lines 55-58).** If the payload length is less than 1.5 K-bytes, the payload length in the management table is updated.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Masuda et al. in the network of Sreejith et al. The motivation for using the feature as taught by Masuda et al. in the network of Sreejith et al. being that it increases transmission efficiency.

Claim 9 is being rejected similar to claim 1, because claim 1 is the method claim, and claim 9 is the apparatus claim.

Regarding claim 10, Masuda et al. disclosed the feature of the fabric-adjusted meter modifier is also dependent on a payload size of the packet **(Masuda et al. column 20, lines 55-58).** If the payload length is less than 1.5 K-bytes, the payload length in the management table is updated.

Regarding claim 15, Sreejith et al. disclosed the method of means for receiving a packet that is placed into a specific COS group pertaining to a specific service being tracked and controlled **(Sreehith et al. column 6, lines 4-38, fig. 3).** IOP 216 receives incoming data packets from PMD 212 and PMD 214 on N input channels and sends the received packets to packet classification controller 305. the controller 305 examines the IP address of the received packets and determines which data packets must be sent to switch fabric 130 and which data packets may be sent back out via PMD 212 and PMD 214, wherein PMD 212 and PMD 214 can be interpreted as two types of services;

means for determining a fabric-adjusted meter modifier depending on a technology of an uplink being used **(Sreehith et al. column 6, lines 17-38, fig. 3).** Data packet load statistics for the O1 uplink path and the O2 uplink path are measured in packet scheduler 310 and stored in uplink load statistics table 325. The load balancing controller 315 uses the measured load statistics stored in uplink load statistic table 325 to modify the routing table information stored in load balancing table 320. Thus, the data packet load statistics are the technology of a limiting uplink, and the load balancing controller 315 is the fabric-adjusted meter modifier that controls and modifies the routing information stored in the load balancing table 320;

means for adding the fabric-adjusted meter modifier to a COS meter corresponding to the specific COS group, wherein said meter comprises a counter that tracks traffic associated with said service over a period of time, and wherein said adding updates said meter **(Sreejith et al. column 6, lines 17-38).** The load balancing controller 315 uses the measured load statistics stored in uplink load statistic table 325 to modify or update the routing table information stored in load balancing table 320 in order to affect load balancing between the O1 and O2 uplink paths, wherein the load balancing table 320 is the meter that manages the load balancing between the O1 and O1 uplink paths.

However, Sreejith et al. did not disclose the feature of determining a fabric-adjusted meter modifier depending on a payload size of the packet. Masuda et al. from the same or similar fields of endeavor teaches the feature of determining a fabric-adjusted meter modifier depending on a payload size of the packet **(Masuda et al. column 20, lines 55-58).** If the payload length is less than 1.5 K-bytes, the payload length in the management table is updated.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Masuda et al. in the network of Sreejith et al. The motivation for using the feature as taught by Masuda et al. in the network of Sreejith et al. being that it increases transmission efficiency.

Regarding claim 16, Sreejith et al. disclosed the method of defining a user-configurable function by way of a user interface **(Sreehith et al. column 6, lines 17-37).** According to the reference, the data packet load statistics for the

O1 uplink path and the O2 uplink path are measured in packet scheduler 310 and stored in uplink load statistics table 325. The packet scheduler 310 routs the data packets based on routing information stored in table 320. The routing information can be the modifier functions; and

assigning the user-configurable function to be a meter modifier function associated with a class of service group in the system, wherein the meter modifier function is used to adjust for a fabric uplink technology **(Sreejith et al. fig. 3, column 6, lines 1-37).** Fig. 3 shows a routing node 216, which comprises a Packet classification 305. The unit 305 receives and examines IP address of the received packets and classifies which data packets must be sent to multiple switch fabrics using uplink paths O1 or O2; The load balancing controller 315 uses the measurement in load statistics table 325 to modify the routing table information stored in load balancing table 320. The packet scheduler 310 routes the data packets based on the routing information provided in the load balancing table 320. The load statistics can be interpreted as the technology used to limiting the uplink;

adding the meter modifier function to a group meter, wherein said adding updates the group meter **(Sreejith et al. column 6, lines 17-38).** The load balancing controller 315 uses the measured load statistics stored in uplink load statistic table 325 to modify or update the routing table information stored in load balancing table 320 in order to affect load balancing between the O1 and O2 uplink paths, wherein the load balancing table 320 is the meter that manages the load balancing between the O1 and O1 uplink paths;

However, Sreejith et al. did not disclose the feature of wherein the meter modifier function depends on a payload size of a packet. Masuda et al. from the same or similar fields of endeavor teaches the feature of wherein the meter modifier function depends on a payload size of a packet **(Masuda et al. column 20, lines 55-58).** If the payload length is less than 1.5 K-bytes, the payload length in the management table is updated.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Masuda et al. in the network of Sreejith et al. The motivation for using the feature as taught by Masuda et al. in the network of Sreejith et al. being that it increases transmission efficiency.

Claim 21 is rejected similar to claim 16.

6. Claims 3-6, 11-13, 18, 19, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sreejith et al. (Pat No.: 7239608), In view of Masuda et al. (Pat no.: 6678474), as applied to claim 1 above, and further in view of Mittal et al. (Pat No.: 7035212).

For claim 3, Sreejith et al. and Masuda et al. both did not disclose the feature of determining if the meter exceeds a black-type limit for the specific COS group; and if the black-type limit is exceeded, then dropping the packet. Mittal et al. disclosed the feature of determining if the meter exceeds a black-type limit for

the specific COS group; and if the black-type limit is exceeded, then dropping the packet **(Mittal et al. see drawing 3, Egress Traffic Manager 28, and Egress Memory Hub 26, and see column 6, lines 16-25).** In the drawing, if the number of packets or length of a particular egress flow ID gets too large, the packets will be dropped. The black-type limit can be referred to, as number of packets or length or a packet gets too large, and will be subjected to packet drop.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Mittal et al. in the network of Sreejith et al. and Masuda et al. The motivation for using the feature as taught by Mittal et al. in the network of Sreejith et al. and Masuda et al. being that it utilizes channels more efficiently.

Regarding claim 4, Mittal et al. disclosed the feature of determining if the meter exceeds a red-type limit for the specific COS group; and if the red-type limit is exceeded, then lowering a priority level of the packet **(Mittal et al. see fig. 6, Ingress Traffic Manager 16, and Ingress Memory Hub 18, and see column 9, lines 1-10).** In the reference, the red-type limit can be referred to as a COS level being reduce based on the number of packets and the sizes of the packets. The example in column 9, lines 1-10 teaches that the COS level being reduced from 5 to 4, based on the number of received packets, and the length of the packets.

Regarding claim 5, Mittal et al. disclosed of determining if the COS meter exceeds a limit for the specific COS group and if the limit is exceeded then perform an action, specified for the limit **(see drawing 3, Egress Traffic**

Manager 28, and Egress Memory Hub 26, and see column 6, lines 16-25). In the drawing, if the number of packets or length of a particular egress flow ID gets too large, which is the limit, the action is that the packets will be dropped.

Regarding claim 6, Mittal et al. disclosed the feature of determining the fabric-adjusted meter modifier comprises retrieving a modifier value associated with the payload size from a technology-specific look-up table **(see fig. 6, Ingress Traffic Manager 16, and Ingress Memory Hub 18).** In the drawing, Ingress Memory Hub 18 stores the received packet information to Ingress Memory 20 including packet length and COS values. The Ingress Traffic Manager 16 obtains that information from the Ingress Memory 20. The payload size can be referred as packet length.

7. Regarding claim 11, Mittal et al. disclosed the comparison circuitry configured to determine if the meter exceeds a black-type limit for the specific COS group; and non-forwarding circuitry for dropping the packet if the black-type limit is exceeded **(see drawing 3, Egress Traffic Manager 28, and Egress Memory Hub 26, and see column 6, lines 16-25).** In the drawing, if the number of packets or length of a particular egress flow ID gets too large, the packets will be dropped. The black-type limit can be referred to, as number of packets or length or a packet gets too large, and will be subjected to packet drop.

Regarding claim 12, Mittal et al. disclosed the comparison circuitry configured to determine if the meter exceeds a red-type limit for the specific COS group; and prioritization circuitry for lowering a priority level of the packet if the red-type limit is exceeded **(see fig. 6, Ingress Traffic Manager 16, and Ingress**

Memory Hub 18, and see column 9, lines 1-10). In the reference, the red-type limit can be referred to as a COS level being reduce based on the number of packets and the sizes of the packets. The example in column 9, lines 1-10 teaches that the COS level being reduced from 5 to 4, based on the number of received packets, and the length of the packets.

Regarding claim 13, Mittal et al. disclosed a technology-specific look-up table **(Mittal et al. see fig. 2, Ingress Queue 42, and see column 4, lines 18-30).**

Regarding claim 18, Mittal et al. disclosed the method of the user-configurable function depends on a current value of the meter **(see column 6, lines 26-58).** The term current value can be referred to as packet information such as forwarding value, or the flow id value that is currently received. In the reference, the forwarding value, and the flow id value are used as basis of the routing.

Regarding claim 19, Mittal et al. disclosed the user-configurable function depends on a last destination of a packet forwarded by the system **(see column 7, lines 26-50).** In the reference, the packets A, and C are going to the same destination, and therefore we can say that the configuration function of packet C is depends on the first transmission of packet A.

Regarding claim 25, Mittal et al. disclosed the fabric-adjusted meter modifier is also dependent on a payload size of the packet **(Mittal see fig. 6, Ingress Traffic Manager 16, and Ingress Memory Hub 18).** In the drawing, Ingress Memory Hub 18 stores the received packet information to Ingress

Memory 20 including packet length and COS values. The Ingress Traffic Manager 16 obtains that information from the Ingress Memory 20. The payload size can be referred as packet length.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sreejith et al. (Pat No.: 7239608), In view of Masuda et al. (Pat no.: 6678474), as applied to claim 9 above, and further in view of Norrell et al. (Pat No.: 6874096).

For claim 14, Sreejith et al. and Masuda et al. both did not disclose the calculation circuitry comprises a plurality of comparators and an adder to sum outputs of the comparators. Norrell et al. from the same or similar fields of endeavor teaches a plurality of comparators and an adder to sum outputs of the comparators **(Norrell et al. see fig. 2, 202, 204, and 208, and see column 4, lines 29-35).** In the reference, the low pass filters 202, and 204 can be interpreted as the comparators, and the summation 208 summed up the outputs of the low pass filters.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Norrell et al. in the network of Sreejith et al. and Masuda et al. The motivation for using the feature as taught by Norrell et al. in the network of Sreejith et al. and Masuda et al. being that it provides system accuracy.

9. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sreejith et al. (Pat No.: 7239608), In view of Masuda et al. (Pat no.: 6678474), as applied to claim 1 above, and further in view of Valvo et al. (Pat No.: 7292534).

For claim 22, Sreejith et al. and Masuda et al. both did not disclose the fabric- adjusted meter modifier is different for hardware-based and software-based routing. Valvo et al. from the same or similar fields of endeavor teaches the fabric- adjusted meter modifier is different for hardware-based and software-based routing **(Valvo et al. column 1, lines 60-67).**

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Valvo et al. in the network of Sreejith et al. and Masuda et al. The motivation for using the method as taught by Valvo et al. in the network of Sreejith et al. and Masuda et al. being that it provides system accuracy.

Regarding claim 23, Valvo et al. disclosed the fabric-adjusted meter modifier is different for hardware-based routing to an Ethernet link and hardware-based routing to a Synchronous Optical NETwork (SONET) link **(Valvo et al. column 1, lines 60-67).**

Regarding claim 24, Valvo et al. disclosed the fabric-adjusted meter modifier is different for hardware-based routing to an Ethernet link and hardware-

based routing to a Synchronous Optical NETwork (SONET) link **(Valvo et al. column 1, lines 60-67).**

10. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sreejith et al. (Pat No.: 7239608), In view of Masuda et al. (Pat no.: 6678474) and Mittal et al. (Pat No.: 7035212), as applied to claim 25 above, and further in view of Norrell et al. (Pat No.: 6874096).

For claim 26, Sreejith et al., Masuda et al. and Mittal et al. all did not disclose the feature of determining the fabric-adjusted meter modifier comprises summing outputs from a plurality of comparators with the payload size if specified by a user-configurable flag. Norrell from the same or similar fields of endeavor teaches the feature of determining the fabric-adjusted meter modifier comprises summing outputs from a plurality of comparators with the payload size if specified by a user-configurable flag **(Norrell et al. see fig. 2, 202, 204, and 208, and see column 4, lines 29-35).** In the reference, the low pass filters 202, and 204 can be interpreted as the comparators, and the summation 208 summed up the outputs of the low pass filters.

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Norrell et al. in the network of Sreejith et al. Masuda et al. and Mittal et al. The motivation for using

the feature as taught by Norrell et al. in the network of Sreejith et al. Masuda et al. and Mittal et al. being that it provides system accuracy.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAN YUEN whose telephone number is (571)270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art Unit 2616

KY